

*with the Author's
profound regret*

REMARKS

6

ON THE

ANTECEDENTS AND TREATMENT

OF

CONSUMPTION.

BY

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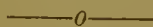
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REMARKS ON THE ANTECEDENTS AND TREATMENT OF CONSUMPTION.



IN order to speak of the treatment of consumption, it is absolutely essential, in my opinion, that we be well acquainted with the antecedents of the disease. It has been well said by a great physician, that the greatest steps in modern medicine have consisted in discovering the *lædientia* and removing them ; as, for example, when it was discovered that the fearful scourge of scurvy which destroyed so many of our brave seamen but a few years ago, in the French wars, was owing to an error in diet. Dr. Law tells us that, in 1780, Admiral Geary's squadrons, after a cruise of ten weeks, had 2,400 men affected by scurvy. There are, of course, cases where the discovery of the causes of a disease are but of slight consequence to its correct treatment. For example, a broken limb may be bandaged up without our caring much how it was broken, or a cataract extracted with the same idea. But, in the case of phthisis, the right treatment of the disease is, I am convinced, so completely involved in the knowledge of the accidents which have produced it, as to render it essential that these be well studied, before approaching the practical question, How are we to treat a particular case of consumption ?

Hereditary Transmission.—Lugol says half of the cases of phthisis are hereditary ; Piorry, one-fourth ; Ruysch, four-fifths. Dr. Walshe says that about one-fourth of his phthisical patients had a father or mother or both parents similarly affected. Dr. Edward Smith's cases gave about one-fourth also. One of the most frequent parental antecedents of phthisis is *scrofula*. This is vouched for by Lugol and Hardy.

Children of *aged parents* are liable to phthisis ; and the offspring of *very young parents*, according to some authors, are also liable. *Excessive sexual indulgence*, or *masturbation*, in the parents are stated to be frequent causes of consumption in the offspring ; in fact, *generative debility*, however caused.

Intemperance.—Among the diseases attributed by medical authorities to the excessive use of alcoholic liquors, it is said that the children of drunkards, and even of gouty parents, are liable to consumption.

Excessive Tobacco-smoking.—Dr. Copland and others have laid great stress on the injurious effects of tobacco-smoking on the offspring, and with justice.

Personal Antecedents.—The influence of *employment* on the production of phthisis is well marked, and it is chiefly to the writings of Villermé, Greenhow, Tardieu, and Edward Smith, that we must refer for information on this point. Dr. Greenhow stated in an address “On the Effects of Trade on Health,” delivered at the London meeting of the Social Science Association in 1862, that in England and Wales diseases of the chest of all kinds, including consumption, caused on an average 100,000 deaths annually from 1847 to 1855. If the mortality through England and Wales could be reduced to that of the most favoured districts, there would be an annual saving of more than 45,000 lives. The most important contribution, however, in my opinion, yet made to the knowledge of the causation of phthisis is that made by Dr. Christison in 1863, at the Edinburgh meeting of the Association. “Taking,” he says, “the population of Scotland in 1855 at 3,000,000, and assuming that the deaths from consumption were nearly all specified, or, at least, nearly so, which is probable, the total mortality in 100,000 was 2,080, and that from consumption 237. Dividing the mainland into large towns of 10,000 and upwards, and the rural mainland, comprising all smaller towns, with the pure country, it appears that the mortality from consumption in 100,000 was in the rural mainland 186, and in the great towns 333, or not much short of double. But let us look into the facts more narrowly, and the real difference will be found still greater. In Glasgow, whose population in 1858 was 356,000, and where all the town-causes of mortality greatly abound, so that the annual deaths reach 2,890 in 100,000, or almost 1 in 38, those from consumption are as high as 385 in 100,000. In the case of Berwickshire, however, we have the most perfect example in Scotland of a population combining the richest agriculture with freedom from the deteriorating influence of mining, manufactures, and large towns. None of its towns exceed 3,500. There is, I think, only one large factory in it—a paper manufactory—and there are no mines. There, accordingly, the total annual deaths are 1 in 70; and the deaths from consumption amount to 104 in 100,000. The general mortality is nearly one-half that of Glasgow; and the share contributed by consumption is nearly one-fourth of the proportion of that city.” The same account holds good for England, although in a rather less marked degree than in the longer-lived country of Scotland. The annual mortality of Scotland is 1 in 48; of Sweden, 1 in 51; of Norway, 1 in 55. In Hertfordshire the mortality from consumption is 179 in 100,000 annually; it is 363 in 100,000 in Liverpool;

331 in 100,000 in Manchester; and actually 402 in 100,000 annually in Merthyr Tydfil. In London the annual mortality from phthisis is 277 in 100,000, or lower than Liverpool or Manchester; but nearly three times that of Berwickshire and at least three times the proportion in Norway. The annual mortality of England is 1 in 45, and the annual deaths from consumption are 258 in 100,000 against 237 in 100,000 in Scotland, and less than 100 in 100,000 in Norway. Dr. Christison also informs us, that there are places where consumption has never appeared among the natives, and that the western islands of Scotland are so favoured in this respect, that no person born and reared in these islands has been known to have died of the disease, if they remained there. From the extracts I have quoted from Dr. Christison, we may learn that town-employments are the great cause of pulmonary consumption, which is now the leading disease of our day; and this may not a little diminish the feelings of satisfaction with which many are accustomed to dwell on the increase of population, which has latterly been so marked in the towns, although not in the country parts of Great Britain.

Other Personal Antecedents.—Copland and others have laid much stress on the effects of *excesses in sexual intercourse* or in masturbation (which latter habit generally arises from the want of normal sexual intercourse) in producing the disease. Dr. Edward Smith mentions that 11 per cent. of his phthisical patients confessed to sexual excesses: 18 per cent. had masturbated; also, that 22 per cent. had had frequent involuntary emissions. *Mental exertion* of too severe and long-continued a kind tends to produce tubercle; and *sad emotions*, especially those of *disappointed love*, have always been credited with the frequent production of decline.

Seasons.—The influence of seasons is undetermined.

Climate or Topical Influences.—It is well known that consumption is found in tropical climates as well as in temperate zones. In South Africa, according to the traveller Livingstone, whose Medical education well qualifies him for an observer, the disease seems to be unknown among the African tribes, as he tells us distinctly that, although he was constantly consulted by the natives for their various diseases, he never met a case of phthisis.

Poverty.—One of the most frequent antecedents of phthisis pulmonalis in Europe is poverty, or the inability to obtain the necessities of existence by means of labour or otherwise. Lombard, D'Épiné, and Lebert have given sufficient evidence that this disease is much more prevalent among the poor than among the upper classes. This cause of consumption has not, in my opinion, been sufficiently dwelt upon by medical authors

who have treated of the disease. The way, too, in which poverty, or the want of a sufficient supply of the essentials of nutrition, acts in producing consumption requires explanation. It would appear from Livingstone's account that the savage tribes of South Africa are subject to periodical want of food. In such cases the natives become exceedingly emaciated, and often die in great numbers of starvation. Nevertheless, this want of food does not develope in their hardy frames tubercles of the lungs, and we must, consequently, look to other causes beyond that of starvation to account for the large amount of the disease in our civilized and industrial manner of existence. With us want of sufficient food is one of the most frequent antecedents of consumption. To recall this subject vividly before the mind I shall quote a few passages. The following is taken from one of the daily London papers of the 26th October, 1864:—"An inquest was held at the Canrobert Tavern, Bethnal Green Road, last evening, on the death, from want, of Emma Jackson, aged forty years.—Martha Burkhardt said the deceased used to bind two pair of boots a day, and she was paid $2\frac{1}{2}d.$ for one pair and $3d.$ for the second, which was of a better kind; she never earned $6d.$ a day, but she used to say she earned more, 'so as to keep up the look of the thing.'—Dr. G. Rolf said there was disease of the lungs and heart; the *cause of death was the lung disease*, accelerated by exposure and want of the common necessities of life."

In the sixth report of the medical officers of the Privy Council for 1863 there is a report by Dr. Edward Smith, "On the Food of the Labouring Classes," in which I find a table of the cost of food of various classes of our workpeople:—Silk-workers, $2s. 2\frac{1}{2}d.$ a week; needlewomen, $2s. 7d.$; kid-glovers, $2s. 9d.$; shoemakers, $2s. 7\frac{1}{2}d.$; stocking-weavers, $2s. 6\frac{1}{4}d.$: and Dr. Smith says:—1. No class under inquiry exhibited a high degree of health. 2. The least healthy are the kid-glovers, needlewomen, and Spitalfields weavers. 3. The average quantity of food was *too little for health and strength*. Of the needlewomen he says: "This is the lowest-paid class included in my inquiries; ordinary hours of work ten to twelve hours. The average income was only $3s. 11\frac{1}{4}d.$ weekly per adult." Mr. Godwin, in his work entitled "Another Blw for Life," says:—"Among the causes which lead to the evils we are deploring, we must not overlook the gradual increase of children, while in the case of the labouring man the income mostly remains the same. The want of *providence* on the part of these men is often commented on with good intentions; but, whilst admitting that better use might be made of their incomes in many instances, we must not omit to remember the cost of living in London, especially with a large family of children. As the children

increase in numbers the wife is prevented from adding by her earnings to the income ; and many years must clapse before the children can be put to work." It will be observed that Mr. Godwin does not include in his definition of *providence* any thought on the part of the poor concerning the number of children they shall bring into their own unfortunate position. In fact, this view of the question is studiously avoided by almost all writers even of the greatest eminence, except by those who, like Mill, Darwin, and a few others, adhere to the truths pointed out by the great discoverer of the law of population, Malthus.

Great towns, then, cause consumption and deterioration of health, by reason of the unwholesome occupations in which they abound. Nor are these unwholesome occupations well remunerated. The fact of their being unwholesome keeps all persons who can afford a choice out of their ranks, but the destitute offspring of a Hampshire or Wiltshire country labourer, with a large family, has no choice. He is penniless, and without even the rudiments of education, and is therefore glad to accept any employment, however deadly, from the grinders' trade of Sheffield to that of the slopworker of Whitechapel, and thus helps to recruit the large ranks of the victims to this fell disease. In comparing the mortality of the highly agricultural county of Berwickshire, in Scotland, with that of Westmoreland and Wiltshire, both agricultural also, we find the mortality as 70 : 57 : 48 ; and according to Dr. Edward Smith's account, the cost of the food of the English agricultural labourer is on an average 2s. 11½*d.*, and that of the Scotch agricultural labourer 3s. 3¾*d.*, showing what we could easily anticipate, that other things being equal, the length of life is inversely proportional to the *standard of comfort* to which the population will consent to people down. Mr. H. Fawcett, in January, 1865, at Brighton, said : " I know our agricultural labourers well, and I ask what is their condition ? It is this, that their wages are insufficient to provide them with the bare necessaries of life. Their wages are so small that no parent can afford to send his children to school." M. Lavergne, in visiting the Lothians of Scotland, where consumption destroys only 125 in 100,000 annually, says of the peasantry : " Their numbers never exceed the limit of a comfortable subsistence." In Norway, as I can vouch from personal experience, the comfort of the rural population is such as one might predict from the knowledge of the very low annual death-rate of that country, 1 in 55. The deaths from consumption are under 100 in 100,000 annually.

It may thus be seen that the amount of pulmonary consumption in this country is in great measure directly attributable to the low wages of the unskilled rural labourer ; and the unhealthy towns merely allow a greater number of persons to live

a few years in a frail state, without really improving the condition of the working classes. Consumption is one of the positive checks, and the saddest of all, to population; and has in great measure taken the place of those rapid epidemics which used suddenly, as they still do in India, to decimate a half-starved, because redundant, population. Mr. Darwin, in his "Origin of Species," as well as Mr. Huxley and Sir C. Lyell, have laid great stress upon the enormous power of reproduction possessed by all animals and vegetables, when placed in positions where their food can be supplied *ad libitum*. The race to which we belong is no exception to this rule, and we have at this day notable examples to illustrate its truth, in the enormous rapidity of reproduction of the inhabitants of the United States and our own Australias. We have there seen the fecundity of that branch of the race to which we belong so great as to enable the early colonists of Massachusetts, &c., to double their numbers independently of immigration, and by the mere powers of a fecundity of which the human race is but one example, in periods in many cases less than twenty-five years. Thus, in the United States before the year 1783, according to J. Garnier, in his work "On Population," war and different circumstances were an obstacle to immigration, and carried off from that country more than Europe furnished it with. The French Revolution was an occasion of migration to America; but this movement was soon interrupted by the war in 1793; and from this time until the Peace of 1815 Europe furnished very few emigrants to the States.

In 1782 the population of the States was 2,389,000

1790 " " 3,929,000

1800 " " 5,305,000

or more than double in *eighteen years*. This great fecundity of the human race has long been known to be the cause of the low wages which it has been my endeavour to prove to be the main cause of consumption at this time in this country. "Nature," says the great discoverer of the *law of increase*, Mr. Malthus, in his "Essay on Population," "cannot be defeated in her purposes. The necessary mortality must come in some form or other; and the extirpation of one disease will only be the signal for the birth of another, perhaps more fatal. We cannot lower the waters of misery by pressing them down in several places, which must necessarily make them rise somewhere else. . . . I believe," he adds, "that it is the intention of the Creator that the earth should be replenished: but certainly with a happy population, not an unhealthy, vicious, and miserable one." Unfortunately, the poor are but too often misled by the educated, as to their duty with regard to posterity, as is forcibly remarked by the most eminent thinker of his time, Mr.

John Stuart Mill, in his "Principles of Political Economy": "While a man who is intemperate in drink is discountenanced and despised by all who profess to be moral people, it is one of the chief grounds made use of in appeals to the benevolent, that the applicant has a large family and is unable to maintain them. Little advance can be expected in morality until the producing large families is regarded with the same feelings as drunkenness or any other physical excess; but whilst the aristocracy and clergy are foremost to set the example of incontinence, what can we expect from the poor?"

I have not been able to ascertain the number of deaths from consumption in France. If we measure these, however, by the rate of mortality (by Dr. Christison's method) prevailing in that country, there has been a great diminution of late years of the ravages of the disease in France. Before the Revolution, the average of life, *vie moyenne*, according to the "Annuaire du Bureau des Longitudes," was 29 at birth, and it is now 39. It is interesting to look at the concomitant circumstances. M. Joseph Garnier tells us, that from 1806 to 1810 there was 1 birth to 30 inhabitants in France; from 1826 to 1830 there was 1 birth to 33; from 1841 to 1845 there was 1 birth to 35; and from 1846 to 1850 there was 1 birth to 37 inhabitants. This explains the increased comforts of the French population. The capital of the country is increasing, and the numbers remain nearly stationary, hence the average dividend is increasing.

I have entered thus at length into the question of the dependence of wages on numbers and capital, in order to give the theory of the causation of the great mass of the cases of consumption occurring in this and similar industrial countries. The theory is, I believe, so well made out, that we may look forward very hopefully to an immense diminution in future of the mortality from such diseases as are caused by overcrowding and unhealthy town-occupations, until, at length, society may solve the problem how to keep the producer in the highest health and at the same time to increase the productive powers of labour.

A remarkable confirmation of the truth of the account I have given of the causation of consumption has recently been furnished (unconsciously, I am informed by the author), from the answers obtained by Dr. Edward Smith to his numerous questions put to 1,000 hospital patients affected with phthisis pulmonalis. Thus, he found the notable fact, that the average number of children which the parents of these patients had produced was 7.5. In some of the families there were as many as twenty-three children. It is easy to conceive to what privations in early life many of these unfortunate patients must have been exposed, from the fecundity of their parents.

Pathological Causes of Phthisis.—Several diseases act in our branch of the human race, not merely in causing the bursting forth of latent phthisis, but they also seem to have the power of developing tubercles in the lungs of those not apparently pre-disposed to the disease. Thus, measles and typhus fever are frequently followed by consumption, whilst scarlatina and small-pox are not so likely to cause this fatal sequela. Diarrhoea and dysentery also tend towards the production of consumption; and, in fact, all diseases which, either acting on the parents or the individual, tend to lower the vital powers.

Alcohol.—Drunkards are well-known to be very liable to become consumptive.

Treatment of Consumption.—Hippocrates recommended asses'-milk in this disease, with open-air exercise; Aretæus, sea-voyages and nourishing food. Celsus and Galen recommended country air, with sea-voyages, and milk diet. Paracelsus it was, and others of the Iatro-Chemical School, in the sixteenth century, who introduced various empirical remedies, among others antimony and mercury, into the treatment of phthisis. The writings of this non-scientific astrologer and alchymist have, in my opinion, done more than anything else to confuse the whole method of therapeutics. Sydenham advised horseback exercise as a certain cure for consumption; Van Swieten praised camphor; Dr. Griffith, iron; Cullen prescribed acetate of lead in hæmoptysis. Heberden praises asses'-milk, vegetable diet, sulphuric acid for sweating, and opium for cough. No new agent in the treatment of this disease was brought forward until the year 1853, when Dr. Hughes Bennett wrote his treatise *On the Value of Fatty Diet and the Administration of Animal Oils in Consumption*. There is no doubt that this gentleman has the high merit of bringing into medical practice the great agent, cod-liver oil, besides having discredited the dangerous empiric remedies of the iatro-chemists.

There has always, however, been a tendency for even the most eminent physicians to run off the rails in the treatment of this sad disease, and for a time to be deceived by the *ignis fatuus* of a specific. Thus, so late as 1861, the distinguished Dr. Beau, of the Charité Hospital of Paris, delivered an address on the *Cure of Phthisis* by means of carbonate of lead pills. He was, he said, in the habit of administering to his patients two grains of the carbonate of lead in a pill, at first one a day, then two, and up to five, with generous diet. The blue line appeared on the 15th day: this Dr. Beau asserted to be a *very curative* treatment of phthisis.

M. Piorry, among his other fancies, has one regarding the curability of the early stages of consumption by means of the inhalation of iodine vapour. I have seen him make use of this

fancied therapeutic agent, but I am not aware that M. Piorry's plan has yet crossed the English Channel, although the Atlantic has recently brought us an enthusiastic advocate of the curative effects of inhalation. Among the iatro-chemists of the day is Dr. J. F. Churchill, of Paris. He informs us that the proximate cause of consumption is the absence of phosphorus from the blood, and he consequently considers that the best method of curing the disease is to introduce the element in its most soluble form, which he has found to be the hypophosphites of lime and soda; and then he makes the following statement: "I regard these as prophylactic and curative in every stage of phthisis; I know that they will prove not only as sure a remedy in consumption as quinine in ague, but also as effective a prevention as vaccination in small-pox."

This remedy was tried in Paris by a commission of the Academy, and in London by Dr. Quain at the Brompton Hospital; in both cases they were found totally inert. Notwithstanding, however, the verdict of these trustworthy jurors, the "Lancet," in a review of Dr. Churchill's second edition, recently published, says (Sept. 3rd, 1864): "Dr. Churchill has fairly made good his claims to a second hearing. . . . The work records a body of no less than 133 fully recorded cases of phthisis, treated according to the method which he advocates, the results of which appear amply to bear out his views so far as regards the efficiency of the treatment." I much fear the reviewer in the "Lancet," like many other able men, has lost his logical powers for the moment, and is inclined to be converted to the empiric treatment of the disease.

One of the most useful inventions of late years for the treatment of diseases of the larynx, trachea, and even bronchial tubes, is the instrument for pulverising liquids brought before the Profession by Dr. Sales - Giron, in 1861. M. Trousseau has for some time past eulogized this instrument, and in 1862 said in one of his lectures: "The method of pulverisation is, I believe, destined to render great service in the medical world. A woman in the Hôtel-Dieu was suddenly seized with cedema glottidis, of so rapid a character, as to endanger life. I caused her to breathe a pulverised solution of tannin. So rapid and complete was the relief, that by the evening all danger was over." He also mentions its utility in ulcers of the larynx in consumptive persons. Dr. G. Gibb, in his treatise "On the Laryngoscope," 1863, bears testimony to the value of Dr. Sales-Giron's instrument.*

In October, 1862, Dr. Cotton read a paper before the Medical

* See a paper "On Inhalation," by Dr. Abbotts Smith, in the *MEDICAL MIRROR*, March, 1865; and a communication to the Medico-Chirurgical Society, February, 1865, by Dr. M. Mackenzie.

Society of London, relating a series of experiments he had made on the treatment of phthisis at the Brompton Hospital for five years, by means of a variety of medicinal agents. He had exhibited the following, each in twenty-five cases of uncomplicated consumption—viz., phosphorus, liquor potassæ, hydrochloric acid, iodide of iron, iodide of potassium, chloride of sodium, vinum ferri, glycerine, chloride of iron, chlorate of potash, quinine, and phosphoric acid. I agree entirely with the remark which it is reported Dr. Thudichum made as to these experiments, namely, that they were of no real value. Indeed, the experiments made by Dr. Cotton appear to me to be far worse than useless, and as indicating that the method of pursuing therapeutical inquiries is still in its infancy. The experimenter takes a number of cases of the disease, occurring in different individuals of every variety of idiosyncrasy, and administers the same drug to each. Some die, some get better, some worse; but besides the drug the patients have taken, time has elapsed, the food and other circumstances of the individuals have produced their effects, and a host of facts have occurred which inevitably vitiate the experiment made with a drug whose physiological action we are unacquainted with. Suppose Faraday or some other scientific chemist to make an experiment in chemistry or physics. Does he not first carefully ascertain every disturbing influence which might vitiate his results before making his experiment? The experimenter in drugs seems rarely to have any idea of this; hence his results are valueless in most instances. The true method of therapeutics is the deductive method, setting out from known effects of drugs, &c., on the human body in health.

That the experimental or empirical treatment of phthisis is discountenanced by the ablest writers on the disease, is clear, from the following quotations from Williams, Walshe, Hughes Bennett, and Parkes. In a lecture "On Phthisis," in the "Lancet," April, 1862, Dr. Williams informs us that "the proper treatment seems to be that which is calculated to improve the nutrition, prevent the irregularities of the circulation, which tend to produce these deposits, and, as far as possible, to elevate the health. There are few remedies of any importance: but one stands apart—cod-liver oil."

Dr. Walshe, in his work on "Diseases of the Lungs," scarcely makes reference at all to *any* remedy in consumption save cod-liver oil, which, according to him, produces the most marked effect in the third stage. He speaks very favourably of change of climate.

The author who has unquestionably, of all others, done the most to elucidate the obscurity hanging over the pathology and treatment of consumption, is Dr. Hughes Bennett. Both in his

works and conversation Dr. Bennett is most sanguine in his views as to the curability of phthisis by proper or curative treatment. Imperfect digestion or mal-assimilation is, according to this author, the proximate cause of tubercle ; and he considers that bad air, &c., act by causing this. He insists strongly on the necessity of oil in the food, to mingle with the albumen of the blood, and cause healthy nutrition. As to the *special treatment* of a particular case, he strongly reprobates the *nimia diligentia medici* in the following terms :—"It is by no means rare to meet with patients who are taking at the same time a mixture containing squills and ipecacuanha to relieve the cough ; an anodyne to cause sleep ; a mixture containing catechu, gallic acid, tannin, or other astringent for diarrhœa ; acetate of lead and opium pills to diminish hæmoptysis ; sulphuric acid drops to relieve sweating ; and cod-liver oil in addition. I have seen many persons taking all these medicines and many others at one time, with a mass of bottles and boxes at the bedside sufficient to furnish an apothecary's shop, without its ever suggesting itself to the practitioner that the stomach, drenched with so many nauseating drugs, is thereby prevented from performing its natural functions." Treatment, says our author, must be simple in order to be successful ; the cough should be treated by cod-liver oil ; diarrhœa, with aromatic mixture : all other symptoms are to be treated by rallying the vital powers by open-air exercise and plenty of good food.

Dr. Parkes has recently, in his "Hygiene," 1864, given, in my opinion, the most philosophical rules for treatment yet laid down, and all on this subject comes with the greatest authority from this eminent physician. He says :—"A few years ago, such influences were ascribed to food as a cause of phthisis, and the occurrence of a sort of dyspepsia (though this does not seem to be common), and the great effect of the treatment (by cod-liver oil) by diet, seemed to show that the fault lay in some particular mal-nutrition, which affected the blood through the lungs. Probably there is truth in this, but of late years the effects of conditions which influence immediately pulmonary circulation and the lungs themselves have attracted much attention. The effects of want of exercise (no doubt a highly complete cause, and acting on both digestion and assimilation) and impure air have been found to be very potent agents in phthisis ; and, conversely, the conditions of prevention and treatment, which have seemed most useful, are nutritious food and proportionate great exercise in the free and open air. So important has the last condition proved to be, that it would appear that even considerable exposure to weather is better than keeping phthysical patients in close rooms, provided there be no bronchitis, or tendency to pneumonia or pleurisy."

Climate for the Phthysical.—From the commencement of October until the end of April, no climate can be more adapted for consumptive patients with tendency to bronchitis than that of Middle or Upper Egypt. Cairo and its neighbourhood is a delightful winter climate; its mean temperature is 59° in January. At Thebes, the temperature is 63° in January, with cloudless skies. After April, the patient, who has the power and means at disposal, should move northwards, to Malaga or Mentone, which latter spot has been rendered classic by the writings of Dr. Henry Bennett. To persons, the immense majority of the phthical, who cannot afford to travel, but who must work in order to live, perhaps the best advice, in my opinion, is, that they should, if possible, emigrate to South Africa or Australia; and there, abandoning all in-door occupations, betake themselves, which they can accomplish in new countries, although in our over-peopled Europe this would be out of the question, to some rural occupation. This would effect a cure in hosts of cases.

The conclusion I would draw from the facts and opinions quoted in this paper are—(1) that consumption does not exist in all localities, being absent from the natives of the northern islands of Scotland, and from the savage tribes of South Africa; (2) it is extremely hereditary, and is found in the offspring of parents exhausted from overwork, intemperance, or weakened sexual organs; (3) it is mainly caused by the unwholesome occupations followed in large towns, and which confine the citizen for long hours within-doors and without exercise; (4) that alcoholism favours its appearance; (5) that poverty, or low wages, which is due to over-population, is in this and other old countries the most prolific cause of this disease, and the way in which it acts is by forcing the offspring of the ill-paid country labourer to quit rural occupations and crowd into the towns for work; (6) that the treatment as well as the prevention of this disease consists almost entirely in securing plenty of open-air exercise and good food, and that no drug specific can ever be expected to be found for a disease which is evidently produced by a lowering of the vital powers.

